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A Tandem Brake Booster

Abstract

A tandem brake booster having a housing defined by a front shell that is joined to a rear shell to create an interior cavity. The interior cavity is divided by first and second diaphragm assemblies that are separated by a partition member to respectively isolate a first chamber from a second chamber and a third chamber from a fourth chamber. The first and third chambers are connected to fluid having a substantially constantly first pressure while the second and fourth chambers are connected to selectively receive the fluid at the first pressure or fluid at a second pressure. A valve controls the communication of the fluid at the second pressure to the second and fourth chambers pressures to create a pressure differential across the first and second diaphragm assemblies and develop an output force to effect a brake application. The partition member is characterized by a disc with a cylindrical body extending from a ledge formed on a peripheral surface of the disc and a flange located on the cylindrical body between the ledge and an end face of the cylindrical body. The flange is formed by alternate radial sections and ramped sections with the radial sec-

tions engaging the rear shell in response to a reaction of compressing a first bead of the first diaphragm assembly to fix the located of partition member within the interior cavity while the ramped sections define a first portion of a flow path through which fluid is communicated between the second and fourth chambers.